Proposed changes to events schema

As the search Events team at Google has worked on features using marked up data, several limitations of the existing spec have emerged. This is a proposal to modify the schema.org spec to handle the top limitations we've seen. It has been revised in light of public feedback on an earlier version of the proposal, see http://www.w3.org/wiki/EventSchemaUpdate for links.

Summary of proposed changes

Goal	Spec modification
1. Support markup for canceled or rescheduled events	Add three new properties: eventStatus, previousStartDate, previousEndDate
2. Allow more event sites to mark up event categories	Add one new property: eventCategory
3. Support recurring events	Make events repeatable (by using occurenceEvent to group startDate and endDate information for each specified occurence). Explicitly call out ISO 8601 support for expression of rule-based recurrence.
4. Collect links to official pages	Use the "url" property (this is not a modification, the feature already exists in schema.org)

1. Canceled/rescheduled events

Add three new properties:
- **eventStatus**: this property is only required if the event is canceled or rescheduled. It however can be used for tentatively scheduled events and events that are scheduled with a definite time. The property can take five possible values, CanceledEvent, RescheduledEvent, PostponedEvent, TentativeEvent, and a final value CurrentEvent, which is optional as it is the default.
  When an event is listed as canceled the whole event is considered canceled. This means that all the dates for that event are canceled. This is the behavior we observe today on sites today. They will create individual events if there is a canceled instance.
- **previousStartDate**: this property is used in conjunction with eventStatus for rescheduled or canceled events. This property contains the previously scheduled start

date. For rescheduled events, the startDate property should be used for the currently scheduled start date, whereas for canceled events, the startDate property should be left blank.

- **previousEndDate**: this property is used in conjunction with eventStatus for rescheduled or canceled events. This property contains the previously scheduled end date. For rescheduled events, the endDate property should be used for the currently scheduled end date, whereas for canceled events, the endDate property should be left blank.

How previous date fields should be filled in:

eventStatus	startDate / endDate	previousStartDate / previousEndDate	Notes
"current"	yes		not required to be listed
"canceled"		yes	either field is fine for date info but previousStartDate / previousEndDate is more clear
"rescheduled"	new	old	
"postponed"		yes	either field is fine for date info but previous is more clear
"tentative"	yes		

Why the change?
Helps with normalization of events across sites and prevents systems from showing bad/stale data. This is a particularly nasty problem because even if many sites remove old events, some others on the web do not, so it is algorithmically hard to tell if the old event still exists.

2. Support for event categories as a property

Add one new property: eventCategory

This would permit sites to use either subtypes, ie. schema.org/MusicEvent, or specify the property as part of schema.org/Event. Many sites show events that are part of multiple categories using one event template for their own site, so the latter method is a more natural way to do category markup for them.

3. Recurring events

We address the desire for startDate and endDate pairs to be repeatable (i.e. for repeating events that are described by enumeration rather than ISO-8601 repetition rules). This is accomplished by allowing any Event to carry an 'occurrenceEvent' property whose value is another Event entity. Effectively this makes a single general Event description serve as a kind of template that references specific occurances which are then typically described using at least startDate and endDate, but potentially any other Event-oriented vocabulary.

(Aside: this is similar to the Good Relations ProductModel construction, i.e. http://schema.org/ProductModel, which also uses a prototypical instance to capture template-like repetition).

If a single event has multiple listed pairs of start and end dates (via occurenceEvent), it means that the event repeats on each of these occasions.

For example:

1) Event repeats every Monday in January 2012.

```
<div itemscope itemtype="http://schema.org/Event"> ...
<span itemprop="occurenceEvent" itemscope itemtype="http://schema.org/Event">
 <time itemprop="startDate" datetime="2012-1-2"></time>
</span>
<span itemprop="occurenceEvent" itemscope itemtype="http://schema.org/Event">
  <time itemprop="startDate" datetime="2012-1-16"></time>
</span>
<span itemprop="occurenceEvent" itemscope itemtype="http://schema.org/Event">
  <time itemprop="startDate" datetime="2012-1-23"></time>
</span>
<span itemprop="occurenceEvent" itemscope itemtype="http://schema.org/Event">
  <time itemprop="startDate" datetime="2012-1-30"></time>
</span>
</div>
```

2) Event repeats every weekend in Febuary 2012.

```
<div itemscope itemtype="http://schema.org/Event"> ...
<span itemprop="occurenceEvent" itemscope itemtype="http://schema.org/Event">
  <time itemprop="startDate" datetime="2012-2-3"></time>
  <time itemprop="endDate" datetime="2012-2-5"></time>
```

```
</span>
<span itemprop="occurenceEvent" itemscope itemtype="http://schema.org/Event">
  <time itemprop="startDate" datetime="2012-2-10"></time>
  <time itemprop="endDate" datetime="2012-2-12"></time>
</span>
<span itemprop="occurenceEvent" itemscope itemtype="http://schema.org/Event">
  <time itemprop="startDate" datetime="2012-2-17"></time>
  <time itemprop="endDate" datetime="2012-2-19"></time>
</span>
<span itemprop="occurenceEvent" itemscope itemtype="http://schema.org/Event">
  <time itemprop="startDate" datetime="2012-2-24"></time>
  <time itemprop="endDate" datetime="2012-2-26"></time>
</span>
</div>
```

This method of markup is verbose but conceptually simple and can represent any combination of date ranges. Note that there is no way to specify that a recurrence occurs forever (i.e. "every Thursday at 8pm") since each instance must be listed explicitly. This is by design, to prevent stale, incorrect data from a web page that is no longer maintained from existing forever into the future.

Note that a recurring event (i.e. a Photography class offered three days in a row) is different than a multiday event (i.e. a 3-day music festival) though the difference can sometimes be blurry (consider art exhibitions or broadway shows).

[ISO 8601 repeating intervals](#) are also supported to allow a more succinct representation of very regular recurrence. This is not a change to the actual schema but rather a clarification to how the field may be used to explicitly call out support for this type of recurrence.

Repeated instances of ISO 8601 repeating intervals are possible but only where the resulting events do not overlap and are discouraged.

4. How to link to official event pages

Use the "url" property.

This is not a change to the existing spec, but simply a clarification. The "url" property can be used for both event details pages on the site containing markup and to link to event details pages on other sites.

Alternative proposal: add a "sameThingAs" property to Thing. This has been discussed intermittently but there has not been a firm conclusion to these discussions. [see http://www.w3.org/wiki/WebSchemas/sameThingAs   - blocking issue seems to be

distinguishing this cleanly from the existing 'url' property.]